

ESTABLISHED 1848



THE RURAL WORLD

DEVOTED TO AGRICULTURE HORTICULTURE HORSES CATTLE SHEEP SWINE ETC.

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COLMAN'S RURAL WORLD.

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AN IDEAL PASTURE.

If he who causes two blades of grass to grow where but one grew before, is a benefactor to his race as well as a wise and progressive citizen, what shall be said of him who takes a barren, hilly, scrub-oak Missouri pasture tract and converts it into choice grazing land, a thick carpet of perennial grass, dotted here and there with a clump of hickory or a spreading oak, making a veritable paradise for stock.

This is what has been done on a portion of the state farm at Columbia, Mo., under the wise and judicious direction of Prof. H. J. Waters, the Dean of the College of Agriculture.

On the occasion of a recent visit to Columbia, the writer was so profoundly impressed with the results of a rational treatment of worthless brush-covered hill pasture, and by the conviction that the process is practicable for every farmer, that he has written the following article, which he hopes will be of service to the thousands employed, that we wish to set forth herein a brief outline of this evolution from the wilderness to a spot of beauty and productivity.

Various efforts were made with poisonous sprays, etc., to clear the land, but recourse was had to the ax. The brush, after being cut and dried, was heaped up and burned and ultimately the rotting stumps were knocked over and disposed of similarly. A few isolated trees were left standing as shade for stock, but sunshine on the soil was the first consideration. The occupation of which is now expected as the "modern woodlandman," proves to be a practical success, the matter of clearing will be simplified.

As is well known, hilly, virgin soil does not tolerate disturbance and on the cleared surface clover and timothy were next sown broadcast early in March. Nature's plan of seedling after the clover had done its biennial stunt, the enriched soil, although thin, gave the timothy a fine start and a luxuriant growth soon covered the ground. The blue grass came, and the meadow fescue, and some orchard grass, and some timothy, but the timothy, being the best pioneer—the best rustler as the stockman says—held the field and subsequent mowing has almost eliminated the weeds. On the 13th instant the grass was thick and strong and lush, although it had supported a steer to three acres since early summer. The occupation of which is now expected as the "modern woodlandman," proves to be a practical success, the matter of clearing will be simplified.

An important source of fertility is the feed, purchased or grown on the farm, which is fed in the usual way from wide, shallow troughs set up about thirty inches from the ground. All the feed given to the steers grazing this land was fed inside the pasture. No hogs were allowed. The Experiment Station has proved the superiority of feeding ground or crushed grain over the old wasteful method of feeding whole corn. Lend the steer an extra set of masticators. In the way of grinding machinery, and he will pay for machine and labor in increased weight and save the waste.

roots, full of starch, left by the rank growth of the previous year, spring up amazingly during the warm, wet spring months, and the luxuriant herbage remains during the remainder of the year, the stock simply taking the surplus growth of a strong and healthy plant, instead of eating all of a tender youngling that never gets a fair start. The damage by tramping is reduced to a minimum on heavy soil, as the heavy growth protects the soil and roots. Even in winter, when feed is high, cattle will get good grazing, nosing about in the snow and cropping the green grass underneath.

This brings us to an estimate of the comparative values of pasturing, selling, silage and dry feeding. Generally speaking, high priced lands make better returns if tilled, and the crops fed green in summer or silage or canned in the fall and fed from the silo, than to keep it in pasture. This estimate has its source in the wasteful, killing methods of handling pasture lands, and while it may be too early to venture the assertion that such wise and careful treatment of grass lands as described above would pay better, the element of labor considered, even on one hundred dollar land, than to devote it to ordinary forms of tillage, it is entirely safe to say that for the average farmer such a pasture would pay better than tillage.

In Holland and Denmark, where intense farming is coupled with the greatest productivity, resulting in the greatest dairy region in the world, where the annual return would be the average American farm, it is a common sight to see herds pasturing on the lowlands, the cows tethered in a long row across the field, the dairy cows within reach. The dairy day they are all moved forward for another "swath," and the previous day's strip begins to grow again. When we consider such a rejuvenation of worthless, hilly lands, it's like "getting money from home," as the boys say; it's like finding money; better still, it's like making something out of nothing. And yet the cost of such a thing is about 14¢ per acre, and the result is made, in the wit and the intelligence of the farmer. We can not give you either; but we offer you the transferred ideas of men who have worked this problem out to a successful answer. What are you going to do about it?

What has become of the great western cattle ranges? Where is the cattle baron of twenty years ago? The cattle baron, not content with the golden egg, has robbed the rich western plains of their principal interest—and he has killed the goose. The plains are there, millions of acres in Texas, Wyoming, Nebraska, but the range has passed forever.

The practical lesson we wish to impress upon our readers is the value of mental alertness. The world is moving, the times are changing. New ideas are born, new methods tried, new facts proven. The man who sticks with the manure of civilization will live longest and enjoy more. "To save time is to lengthen life." Saving time does not mean idleness; it means economy. It is within the reach of every farmer to produce just such a pasture tract as we have described, with little expense and a little patience.

It is proper to say that such a radical change can not be made in a hurry. It will require three years, at least, after land is cleared, to bring it to its best. Furthermore, it is necessary to add that after years of grazing, unless considerable additions are made through grain feeding, there may come a time when it will pay to top dress the turf by either barnyard manure or some chemical fertilizer for which the soil calls. It is believed, however, that under ordinary conditions of feeding other steers, dairy cattle, or other forced stock, ample returns will be made to the soil for whatever is taken off in the way of grazing.

Such judicious management as we have indicated will not only produce a thing of beauty and a joy forever, but an investment making good returns at a minimum of labor and care.

THE SHAW BANQUET.

Henry Shaw provided in his will that a portion of the funds of his estate should be devoted to giving an annual banquet to the farmers, horticulturists, fruit growers and others interested in kindred pursuits. The thirteenth annual observance of this provision occurred Nov. 19th at the Mercantile Club in St. Louis, and as many of the prominent members and officers of the Apple Growers' Congress were present, the occasion was largely devoted to a discussion of orchards and the apple industry generally. Before and during the dinner, to which nearly one hundred and twenty were invited, the guests devoted themselves to personal discussion of mutually congenial topics and the exchange of individual views. After the banquet the farmers, horticulturists, fruit growers and others interested in kindred pursuits, all bearing upon the subjects for which these meetings were inaugurated. Dr. John Green acted as toastmaster in place of Dr. Wm. Trelease, the Director of the Missouri Botanical Garden, who was unavoidably absent. We will give in our next issue a full report of this interesting function and are also pleased to present on this page a portrait and sketch of the famous philanthropist who founded the Missouri Botanical Garden and the Shaw School of Botany, and whose name is linked with the best growth of the metropolis of the Mississippi Valley.

EDUCATION FOR THE FARMER.

Editor RURAL WORLD: No tendency of recent times among farmers is more significant than the general demand for definite knowledge about the various operations of the farm. It is well recognized by all progressive farmers that success in farming, as in other vocations, comes as a result of clear, definite knowledge. This knowledge, the result of many careful experiments, and the best experience of the most successful farmers, is more easily acquired in an Agricultural College than by long experience on a farm.

It is safe to say that no occupation engaged in by ordinary men requires a more careful and accurate knowledge of natural phenomena than farming. The physiology of plant growth, the physiology of animal nutrition and animal breeding, the chemistry of plants, of stock food and of the soil, are all subjects requiring the most careful and accurate knowledge, and the farmer must of necessity know the effect of these sciences upon the productivity of the soil and the efficiency of stock food. Farmers have begun to realize the necessity for careful training in these subjects, and as a direct result of this awakening, agricultural colleges have been established in every state in the United States.

The rapid development of agricultural instruction has indicated more than any other one thing, the fact that farmers are satisfied that education in agriculture is a good investment. Two things are required for financial success in farming: First, a good business ability; second, a knowledge of the principles underlying the production of plants and animals. The Agricultural College cannot give a man business ability. The Agricultural College does presume to give his students a knowledge of what to do, how to do it, and why. Those who have studied the subject of agricultural education in all of its phases, believe that a full four years' college course is none too long for teaching this subject thoroughly. Therefore, we find in all of the best Agricultural Colleges a thorough collegiate course, and the graduates of these courses are well trained. There are, however, a large number of young men who are not able to take a four years' course, either for financial reasons or otherwise, but who realize thoroughly the necessity of better training in agricultural subjects. These young men may enter the short courses in agriculture which are offered by most agricultural colleges, and there gain the knowledge which they seek. The Missouri Agricultural College, Columbia, Mo.

SOME ODD NOTES.

Editor RURAL WORLD: Let me thank Geo. Kavanagh, page 34, for his compliments, and say to him that he may safely pasture that clover next season. At least this plan is often followed here, by being sown instead of wheat. Bro. K. can not get more out of that wheat than he can get out of the clover, and the grain, and buying corn for the hogs? I know that your plan is an easy one, and in seasons of light rainfall the hogs will get about all of the grain, but I would much rather harvest the wheat and put its value in corn into the hogs. Then sow the land in the next year with wheat, and improve it much faster than by hogging down the wheat.

You are certainly right about the "time to harrow," also about rape. By the way, I am not sure that you cannot grow your own rape seed in Pulaski county; a man in Dent county told me that he had grown it there, and if he can grow it, you can.

I wish E. L. Rainey had told us what kind of a weevil it is that he finds in his corn. I suspect that it is the Angoumois grain moth, and if so, he can use blanching of carbon to destroy it. Write your Experiment Station about the matter and follow their advice.

Bro. Bethune should write often, and of practical farm operations once in awhile. If Farm Economy is his hobby, it is a good one, and I will help him ride it. When I see corn succeed, corn, year after year, on the same land, and the manure made by the farm team thrown over the creek bank to wash away, I see in the future, and in the near future, lands that are now the pride of their owners as wasted and bare as the fields of old Palestine; that "land of exceeding richness" in years gone by. I think that one of the greatest elements of danger to the farming people of some sections is the very richness of the land itself, and its power to produce good crops for many years without any system of manuring. When these lands once become exhausted they are the worst worn out lands in the world and the hardest to bring back to a state of productivity. I know whereof I write, for I can drive two hours and find lands that once raised 7 bushels of corn per acre and will not raise 3 now; the soil is still dark and rich looking, but it will not produce paying crops. When it is too late some of our farmers

will realize that they have drawn upon the fertility of their lands until their drafts are no longer honored. Again, I can drive two hours and find lands that once raised 7 bushels of corn per acre and will not raise 3 now; the soil is still dark and rich looking, but it will not produce paying crops. When it is too late some of our farmers

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THE MANURIAL VALUE OF FARM CROPS.

Editor RURAL WORLD: One of the richest harvests of our farms is now with us, and unlike other farm crops, this crop can be gathered through the fall, winter and spring months, and it perhaps depends more on the skill of the farmer as to quantity than on the season. This crop is manure—the farmers' saving bank, safety deposit and legacy to leave to his children, and to be enjoyed by himself year after year. How few realize the possibilities of manure and how many waste a great part, and in many cases, the entire crop.

Take the case of the corn crop as an example. Every acre of standing stalks left to bleach and blow away or to be cut and burned represent a value of \$1 per acre in fertility if properly gathered and fed to stock, and their feeding value is from \$1 to \$2 per acre, depending upon the manner of preparing the stalks for food. The corn crop of Cedar Hill Jersey farm this year, estimated to be worth \$20 for the grain and the same for the stalks, plus the manurial value, places the crop at \$41 per acre, and owing to cold, wet season we have only three fourths of a crop.

Many farmers complain of the heavy work connected with handling the manure. This we admit in case of the back number farmer, but why is he a back number, and the Farmers' Institutes brought to his door to instruct him, the Agricultural College to spread the doctrine constantly and his up-to-date neighbor to set him an example.

With well constructed yards and stables, and the manure spreader, the crop may be harvested daily. At Cedar Hill Jersey farm, the manure is gathered and run directly into spreader, then to fields every day in the week. This crop differs from most others for the reason that it is never as good as the day it is produced, so the sooner it is applied to the land the better it is. But few farmers realize the value of manure, and a manurial value, in most cases 50 per cent of their food value, so that a farmer can well afford to study the different feeds and learn of the ones most valuable. The dairyman is especially fortunate in this respect, as the commercial feeds he is forced to buy to balance his rations of corn and ensilage are very rich in food elements for growing crops. Take cottonseed meal as an example. The different experiment stations find that the clear meal is a high grade fertilizer in itself, and when fed to dairy cows, the resulting manure is as valuable as the meal would have been before feeding. Clover hay at 40 per ton is capable of returning the same value as manure. And skim milk, which is so little valued by many creamery patrons, is worth \$9 per ton for its nitrogen content.

A MISSOURIAN AT HOME.

Editor RURAL WORLD: The sun went down in a blaze of glory yesterday evening as our train rolled over the Cimarron river in the upper portion of Oklahoma Territory, and it was dark by the time we crossed into Kansas at Caldwell. Daylight bronzed the eastern horizon as we drew into Kansas City the next morning. After breakfast I boarded the Chicago & Alton train for St. Louis, to ride over the richest agricultural portion of my home state.

I feel in a mood to pencil you a few lines "Dear Old Missouri," tempered by recent experiences in other sections of our great republic. I am familiar with the state in every section, appreciate its wonderful agricultural possibilities, the excellent educational facilities provided for its farmers by the state, the numerous herds of thoroughbred and pedigree stock, the excellent orchards, barns and other evidences of the highest degree of excellence in advanced scientific agriculture scattered over its broad area, but I am also painfully aware that the great majority of the rank and file of her farmers are a decade behind some of the sections I have recently visited, in everything that makes for progress, advancement, prosperity and good citizenship in its highest sense. It would enlighten these knights of the pitchfork and the hoe if they could appreciate and apply to their own case the counsel by the farmer poet, "Burns!"

"O wad some Power the gillie gillie be,
To see oursel as thine as us!
It wad Trae mony a banter free us,
An foolish notion."

The class to which I refer are not new settlers, they are the old mossback element, the first settled states, who seem to have been frozen into the methods of half a century ago. Their aim is apparently applied to the problem of immediate existence, they have no ambition to make two blades of grass grow where one grew before, but seem to content themselves with growing enough in a crude way to enable them to subsist. I can see right now before me, in the richest section of the Missouri river bottoms, where nature has this season blessed some of them with a bountiful crop, that they are not even taking the trouble to save it, but allow it to go to waste in the most wasteful way. These men have been farming as they call it, prate of how their fathers and grandfathers did, and spend their time whittling sticks and trying to legislate themselves into prosperity, instead of helping themselves in an intelligent way when the opportunity is thrust upon them. These men are rich in natural resources of Missouri enable this class of people to exist with the minimum of labor and they have not sufficient ambition to go elsewhere and see what others are doing. Fortunately for the state, this class is gradually diminishing in numbers; during the past decade there has been a large influx of new and energetic blood into the agricultural community and the aggressive end of the old set has been stimulated into greater activity to an extent that will shortly place the mossback element in the minority.

A Missourian has to see things: The mossback farmer has not even the slender excuse, want of example, to plead. As I roll over the rich bottom lands of the Missouri river and the fertile uplands beyond, I see scores of well tilled farms, with bountiful crops, well cared for buildings and fences trim and neat; yet mixed up with these are samples of the barnacle farmer who attempts to farm the ship of agriculture progress as an emblem of the incubus it must carry with it into port. On the barren hills of New England, this class would starve to death, where a hardy peasantry now flourish and send forth shoots to instill new life and ambition into industry. What chance these old Missouri mossbacks are asleep in. The Yankee may have lots of faults, but he is ambitious, educated and intelligent; a valuable and profitable citizen of our great commonwealth. I regret I cannot say that much for the majority of the farmers of Missouri, who are the approximate too closely to the old-time "poor white trash" of the south to be valuable for any purpose, not even to themselves. Their limited efforts at cultivation are half the time misguided through sheer ignorance, and the products wasted by shiftless methods that belong to a bygone era. These men are plug horses, broken-down scabs and dilapidated improvements, their main employment politics, protracted religious meetings and trying to get something for nothing, meanwhile howling against those who have earned something by superior intelligence and industry. "Lo! the poor farmer, he is being robbed by railroads, by merchants," and shouting "Down with corporations; down with railroads; tax them; tax the cities; they have all the money; they just rob us poor farmers; we produce the food they eat; they are not like the other fellows; let us govern the state and the other fellows pay the taxes."

Missouri does not have a corner on mossback farmers, by any means, but she has more of them than she can afford to sustain, rich as the natural resources of the state are—fact which enables them to hang on like leeches, as it is easier for them to exist here than almost any place they could go. Example and precept in the line of lifting them out of their rut, they are not like water off a duck's back. "Wee us hev bin livin' on this crick since the county was organized," and there you have the mossback.

(Continued on Eighth Page.)

NEWS AND COMMENT.

It is said that the Armour have been quietly buying up all the potatoes in the northwest with the intention of cornering the succulent tuber.

Word comes that Europe has suddenly plunged into mid-winter. In this country the delightful autumn is furthermore a great fuel-saver and we're getting even with the coal barons and their efforts to boom prices without half trying.

The completion of a Pacific cable within two years is assured, under circumstances favorable to the United States government. The new line will connect San Francisco, Honolulu, Manila, and Hong Kong or some other Chinese port.

An exposition devoted to "hygienic milk supply" will be held in Hamburg, Germany, May 10th, 1903. Our National Dairy Division of the Department of Agriculture should send a special representative and issue a bulletin dealing with this important pure food subject.

The abdication of King Cotton in favor of King Corn, who now reigns in this broad realm as the most important crop. Indicates that food is more than raiment. Cotton is still king of fibers, however, and by new processes and products of manufacture is extending his dominion.

A wisely planned and well-directed effort is being made by the various Poland-China associations to unite in one organization. The matter will come up at the International Show at Chicago next week, and the reasons for the union are so self-evident as to require no argument.

A bulletin has just been received from Kansas showing final crop estimates for 1902. Prominent items are 54,649,236 bushels of wheat, 201,267,102 bushels of corn. The total value of all crops and products was \$115,197,413. It also states that Kansas has \$115,197,413 worth of live stock on hand.

We are sorry to hear through a local exchange of the sudden illness of Wm. H. Freeman, of Altamont, Ill., our old friend and long time contributor. Dye, his cheerful philosophy in the face of suffering is a beautiful example for all men to emulate. We hope to hear good reports from him.

John B. Billy of Quitman, Mo., is said to be the largest individual landholder in this country. He owns or has leased in this and adjoining states nearly 300,000 acres. He is rough in speech, dress and manner, but is a shrewd business man with an insatiable appetite for land and a hobby for litigation.

Shrewd speculators are saying that there are great possibilities for profit in the grain market and that the time is ripe for a substantial advance in the price of wheat. Why do the speculators wait until the farmer has sold his wheat before operating for an advance? Here is a harder one: Why do the farmers rush their wheat to market all at once as soon as the threshing season is over?

The bulls and bears are bellowing and growling in the corn pit on Chicago Board of Trade. The "shorts" who have been betting that corn would be plenty and cheap are squirming and backing and the fellows who always have a "corner" in their own grain are grinning. The advancement of prices are pleasing and going. Here's the whole thing in a nutshell: If the bulls "clear up" a million dollars some bear loses that amount, and vice versa. Will somebody please answer: "What is the difference in principle between a man who bets on a horse and playing the races or betting the tiger at roulette, faro or craps?"

A measure is now pending in Congress embodying what is known as the "Post Check" System, which is intended to furnish something more simple and accessible than the money orders for ready use in making small payments. No probability of movement of this sort ever had such unanimous support throughout the whole country, there being an almost universal indorsement of this new currency. It is in effect a greenback in denominations from 2 cents to five dollars, which passes current like any other money, and the holder writes in a space on the back the name of a person to whom he wishes to send it by mail. It then becomes payable to the payee only, and on his endorsement is deposited in the bank and gets back to Washington through the usual channels and is destroyed as "mutilated currency."

The short course in the Missouri Agricultural College is a great feature of educational work. It opens up to farmers opportunities for special study during the winter months at small expense. A course in agriculture (plant production) is offered also in Animal Husbandry, Horticulture and Dairying. No examination is required. The aim in offering these courses is to give thoroughly practical instruction in subjects which are of immediate value to the practical man, instruction that can be applied directly to various occupations connected with country life. Therefore, students are required to devote at least half their time to practical work in stock judging, planting, pruning and propagating plants, veterinary demonstrations, and practical work in milk testing, butter and cheese making, etc. The course begins Tuesday, December 30th, 1902, and continues until March 21st, 1903. Some of the best students in the past have been graduates of several years' experience. These men, as well as the students in longer courses, have found that in no other way can a farmer secure so much valuable knowledge in so short a time and at an expenditure of so little money.

The Dairy

THE CALF PATH.

One day through the primeval wood,
A calf walked home, as good calves
should;
But made a trail all bent askew,
A crooked trail, as all calves do.
Since then two hundred years have fled,
And, I infer, the calf is dead.
But still he left behind his trail,
A path thereby hangs my mortal tale.
The trail was taken up next day
By a lone dog that passed that way.
And then a wise buller sheep
Pursued this trail of o'er vale and steep,
And drew his flock behind him, too,
As good bull-herders always do.
And from that day o'er hill and glade,
Through those old woods a path was
made,
And many men wound in and out,
And dodged and turned and bent about,
And uttered words of righteous wrath,
Because 'twas such a crooked path;
But still they followed—do not laugh—
The first migrations of that calf.
And through this winding woodway
stalked
Because he wobbled when he walked.
This forest path became a lane,
That bent and turned and turned again;
This crooked lane became a road,
Where many a poor horse with his load,
Toiled on beneath the burning sun,
And traveled some three miles in one.
And thus a century and a half
They trod the footsteps of that calf.
The years passed on in swift stride,
The road became a village street,
And this, before the men were ware,
A city's crowded thoroughfare,
And soon the central street was this
Of a renowned metropolis.
And men two centuries and a half
Trode in the footsteps of that calf.
Each day a hundred thousand rout
Followed the zigzag calf about;
And o'er his crooked journey went
The traffic of a continent.
A hundred thousand men were led
By one calf near three centuries dead.
They followed still his crooked way,
And lost one hundred years a day;
For thus that reverence is lent
To well established precedent.
A moral lesson this must teach,
Were I ordained and called to preach,
For men are prone to go it blind
Along the calf-paths of the mind,
And work away from sun to sun
And do what other men have done.
They follow in the beaten track,
And out and in, and forth and back,
And still their devious course pursue
To keep the path that others do.
But how the wise old world-gods laugh,
Who saw that first primeval calf!
And many things this tale might teach—
But I am not ordained to preach.
—Sam W. Foss, in Boston Plain Dealer.

CURRENT DAIRY NOTES.

The Missouri State Dairy Association did a fine thing when they elected Mr. W. W. Marple of St. Joseph, President. Mr. Marple supplemented his famous Palmyra speech, "Why not Missouri?" by the inquiry "Where are we at?" We hope for great things from this pushing, level-headed business man, who has already done much to forward the interests of Missouri dairy farmers.

Thirty-five dairymen at Worcester, Mass., were caught for selling butter as butter by George F. Whitaker, agent of the State Dairy Bureau. We hold our breath to see whether Massachusetts enforces laws of this character.

One of the most entertaining addresses made at Columbia during the recent meeting of the Missouri Dairy Association was delivered by Dr. W. McMillen, who occupies the chair of Pathology and Bacteriology at the State University of Missouri. The talk was on the bacteriological factor in milk, and was all the more appreciated as the Doctor was not on the regular program and had prepared no set speech, but just talked to the dairymen as he would have done to one of his classes. He illustrated in a convincing way the importance of cleanliness in milking and the necessity for cooling milk at once in order to extend its keeping qualities. We hope to hear more at length to our readers Dr. McMillen's researches in this important field of dairy science.

Josh Billings said: "I've seen a good many articles on milk, but the best thing I ever saw on milk was cream."

The members of the Missouri Dairy Association were glad to see Uncle John Patterson looking so young. His seventy-two years sit lightly upon him—and age has not staled his good nature nor his wit nor years of hard work dulled the edge of his keen judgment and common sense.

Milk is a perfect food. It is nature's own. It contains in right proportions all the useful elements to sustain life, promote health and create strength. It is both food and drink. We are talking about good milk. Good butter is the most digestible, most healthful fat that can be found for human food. It beats cod liver oil.

Old as the Pyramids
And as little changed by the ages, is Scrofula, than which no disease, save Consumption, is responsible for a larger mortality, and Consumption is its outgrowth.

It affects the glands, the mucous membranes, tissues and bones; causes blemishes in the neck, catarrhal troubles, rickets, inflamed eyelids, sore ears, cutaneous eruptions, etc.
"I suffered from scrofula, the disease affecting the glands of my neck. I did everything I was told to do to eradicate it, but without success. I then began taking Hood's Sarsaparilla, and the swelling in my neck entirely disappeared and my skin resumed a smooth, healthy appearance. The cure was complete." Miss A. M. MITCHELL, 515 Scott St., Covington, Ky.

Hood's Sarsaparilla and Pills
Thoroughly eradicate scrofula and build up the system that has suffered from it.

oil as a builder of tissues for the anemic, the consumptive and all to whom that detestable fish oil is generally prescribed. Cheese is the most condensed food we eat; as a flesh maker it has no equal. It is cheaper than meat, more digestible than cereals (when ripened) and affords a perfect item of the dairy menu. The Kentucky Colonel said: "There ain't no bad whiskey, some's better." Those who have learned to discriminate in cheese can not quite say that of this proteid, but he might safely say, "There is no bad cheese except the green uncurdled kind, which are hard to digest, and the overripe kinds, which need an undertaker." A well ripened cheddar or granulated "Longhorn" is an article of diet every strenuous American should cultivate.

Our regret at seeing the old wheelhorse of Missouri's Dairy Association—Mr. J. L. Erwin—resign his treasure box, is tempered by the knowledge that the financial affairs of the society are in good hands. Mr. B. C. Settles of Palmyra, the newly elected Treasurer, is a young man of acknowledged business ability and he stands high in the estimation of his fellow-townsmen and of the members.

LATEST MARKET CONDITIONS.

There is a very marked shortage of highest grade of creamery butter in the markets. At no time has the supply in the last year been equal to the orders, and "Can't get the goods" is the best commission man can do. The price on extras as shown by the various market centers is as follows:

Elgin	25 1/2
New York	25 1/2
Chicago	25 1/2
Philadelphia	25 1/2
Boston	25 1/2
Washington	25 1/2
New Orleans	25 1/2
Baltimore	25 1/2
St. Louis	25 1/2
Cincinnati	25 1/2
Newark, N. J.	25 1/2
St. Paul	25 1/2
Minneapolis	25 1/2
Milwaukee	25 1/2

The future of butter is to be for the next three months a matter of speculation. It is shown by the figures in the article on the "October oleo output," the make of that product is not diminishing to any extent; the inevitable shrinkage of milk on the approach of cold weather is naturally a bull factor in the market; prices being expected, we believe extreme prices will be reached, and should not be surprised to see Elgin quotations at 30c by Feb. 1st.

If Your Friend Is Sick . . .

Tell Me the Book to Send.

No money is wanted—not from you nor from him. I ask only a postal card and I ask it as an act of humanity.

Then I will do this:
I will mail the sick one an order—good at any drug store—for six bottles Dr. Shoop's Restorative. He may take the month at his own risk. But if he fails, the cost is \$2.50. If the sick one even thinks it has failed, I will pay the druggist myself.

Please note what that means. I furnish a costly treatment that I spent a lifetime in perfecting, and whenever it fails the test is entirely free. But if it succeeds, my records show that 39 out of each 40 get well, and pay for the remedy gladly.

No other remedy, in chronic and difficult cases, could stand a test like that. The reason is this: My Restorative alone strengthens the inside nerves. This power, which alone makes each vital organ do its duty. There is no other way to make weak organs well.

Simply state which Book No. 1 on Syphilis, Book No. 2 on the Heart, Book No. 3 on the Kidneys, Book No. 4 for Women, Book No. 5 for Men (sealed), Book No. 6 on Rheumatism.

Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

MAJOR ALVORD'S BAD BREAK.

Major Alvord, Chief of the Dairy Division, Bureau of Animal Industry, Department of Agriculture, has placed himself in a very unhappy position so far as the dairy interests, which he is supposed to represent, are concerned. The Major is apparently very well satisfied with himself and makes no apologies for calling the American buttermakers "thieves" and "frauds" for coloring their butter.

Not Major Alvord's sensational statements at Milwaukee, nor indeed his personal views at all, but the fact that by himself so utterly out of touch with his constituency that it would seem to indicate generally that his career of usefulness as the nominal Head of the Dairy Interests in the United States was near its close, and that particularly the question is pertinent: "How long will the dairymen tolerate an official who is antagonistic to them?"

OCTOBER OLEO OUTPUT.

The RURAL WORLD has stated on various occasions that much of the old "uncolored" oleo was being sold without the payment of the 10c tax and believed by the purchaser, except in the case of a hotelkeeper or restaurateur, to be butter.

As a rule the price is nearly if not quite up to the price paid for butter. While it does not grow with the effulgent golden hue of old, it is also important to note that it no longer looks like cottonseed, but has a shade of yellow which makes it pass for winter butter. Chicago "Dairy Produce," commenting upon the output and prospects, says the government is having its own troubles with the makers of oleomargarine, and as a result of the inability of the government chemists to identify palm oil when mixed with cottonseed oil and introduced into oleomargarine, both letter and spirit of the law of 1902 is being generally violated, and an article w-l-a pronounced yellow color is being placed upon the market under the 10c tag.

Until about the middle of September the internal revenue department had the traffic pretty well in control. Then a cottonseed oil mill at Louisville, Ky., placed upon the market a brand of oil which contains a coloring agent which gives a fair yellow color, which the government chemists have apparently thus far failed to identify. It is plain to anyone with experience in oils that the agent is palm oil. But in the small quantities of palm

Nobody else apparently dares put his name on his lamp chimneys.

MACBETH.

If you'll send your address, I'll send you the Index to Lamps and their Chimneys, to tell you what number to get for your lamp.

MACBETH, Pittsburgh.

oil mixed the chemists have apparently failed to detect it in a manner definite enough to furnish evidence in court.

The result of this scheme has been to greatly increase the sales of the so-called "uncolored" until the figures for October ran up to \$4,000 fifty-pound tubs, compared with \$5,500 last year, 74,076 the year before and \$5,143 for October, 1899.

The make of the Chicago factories for October of the past four years, expressed in fifty pound packages, together with Chicago's receipts of butter in packages and average price, is given below:

Year	Butter	Price
Oct., 1902	64,000	23.4
Oct., 1901	65,500	23.3
Oct., 1900	74,076	25.9
Oct., 1899	55,143	23.3

Today the only thing which stands as a protection of pure butter against the oleomargarine is the very poor quality of the oleomargarine made with this oil. With the exception of one or two manufacturers in this city, everything has been sacrificed for color. The yellower the goods the poorer the quality. They are being sold at unprecedentedly low prices—from 10c to 12 1/2c to retailers—in order to force them into consumption. As a result this cheap oleomargarine is as cheap and in some instances cheaper than lard. As a matter of fact, the character of the goods is more like that of cottonseed than butter, and they are probably displacing

BUTTER SCORING AT MISSOURI DAIRY CONVENTION.

Name and address.	Flavor.	Body.	Color.	Salt.	Package.	Total.
F. T. Henry, Bolivar, Mo.	25 1/2	15	10	5	5	100
Mrs. W. L. Seymour, Palmyra, Mo.	25 1/2	15	10	5	5	92
H. C. Goodrich, Calhoun, Mo.	25 1/2	15	10	5	5	91 1/2
S. W. Coleman, Sedalia, Mo.	25 1/2	15	10	5	5	91
Wm. Plummer, Grace, Mo.	25 1/2	15	10	5	5	91
G. M. Headley, Sedalia, Mo.	25 1/2	15	10	5	5	91
Corder Creamery Co., Corder, Mo.	25 1/2	15	10	5	5	89 1/2
F. Lefebvre, Bolivar, Mo.	25 1/2	15	10	5	5	89 1/2
Joseph Elliott, Winona, Mo.	25 1/2	15	10	5	5	89 1/2
Phil Creamery Co., Corder, Mo.	25 1/2	15	10	5	5	89 1/2
C. R. McDonald, Princeton, Mo.	25 1/2	15	10	5	5	89 1/2
Emma Creamery Co., Emma, Mo.	25 1/2	15	10	5	5	89 1/2
Sweet Springs Creamery, Sweet Springs, Mo.	25 1/2	15	10	5	5	89 1/2
Hannibal Creamery Co., Hannibal, Mo.	25 1/2	15	10	5	5	89 1/2
D. P. Daniels & Son, Vandalla, Mo.	25 1/2	15	10	5	5	89 1/2
C. Buchanan, Bolivar, Mo.	25 1/2	15	10	5	5	89 1/2
Palmyra Creamery Co., Palmyra, Mo.	25 1/2	15	10	5	5	89 1/2
Nathan King, Columbia, Mo.	25 1/2	15	10	5	5	89 1/2
J. L. Irwin, Steadman, Mo.	25 1/2	15	10	5	5	89 1/2
Wm. Brown, Concordia, Mo.	25 1/2	15	10	5	5	89 1/2
R. E. Brown, Macon, Mo.	25 1/2	15	10	5	5	89 1/2
Carrollton Creamery Co., Carrollton, Mo.	25 1/2	15	10	5	5	89 1/2
John Patterson, Kansas City, Mo.	25 1/2	15	10	5	5	89 1/2
Mexico Creamery, Mexico, Mo.	25 1/2	15	10	5	5	89 1/2
Macon Creamery, Macon, Mo.	25 1/2	15	10	5	5	89 1/2
W. S. Dille, Holden, Mo.	25 1/2	15	10	5	5	89 1/2
Clinton Creamery, Clinton, Mo.	25 1/2	15	10	5	5	89 1/2
M. D. Gillespie, Columbia, Mo.	25 1/2	15	10	5	5	89 1/2
A. M. Laren, Kansas City, Mo.	25 1/2	15	10	5	5	89 1/2
Concordia Creamery Co., Concordia, Mo.	25 1/2	15	10	5	5	89 1/2
S. M. Clayton, Holden, Mo.	25 1/2	15	10	5	5	89 1/2
Eugene Gauss, Columbia, Mo.	25 1/2	15	10	5	5	89 1/2
Mrs. Thompson, Columbia, Mo.	25 1/2	15	10	5	5	89 1/2
G. H. Strickler, Columbia, Mo.	25 1/2	15	10	5	5	89 1/2
Blue Valley Creamery Co., St. Joseph, Mo.	25 1/2	15	10	5	5	89 1/2
J. B. Clinges, Unionville, Mo.	25 1/2	15	10	5	5	89 1/2

CHEESE SCORING.

Name and address.	Flavor.	Texture.	Color.	Style.	Total.
H. T. VanLoon, Herington, Kas.	39	29 1/2	15	10	100
J. W. McFerrin, Williamsburg, Kas.	40	30	15	10	95
Appleton Creamery Co., Appleton City, Wis.	38	25	15	10	88
Appleton Creamery Co., Appleton City, Wis.	36	24	14	10	84
Jos. Taylor, Knox City, Mo.	35	25	14	10	84

lard to a greater extent than butter.

While the figures for October show a big gain in the oleo make, the consumption of butter as shown in receipts for this city proves that the butter is getting the increased consumptive demand, and the trade continues healthy.

The situation, however, emphasizes the fact that there are loop holes in the law which must be patched up at the coming session of congress. While the internal revenue department can enter every oleo factory and take samples of every ingredient going into the product, the officers of the government have no right to enter a cottonseed oil mill to see how the oil is made. Therefore, the department must depend upon chemical analysis to locate palm oil, and this oil is chemically so near that of cottonseed oil that no analysis thus far devised has been able to detect it.

The experience of the past few months has demonstrated one thing, and that is the fact that nothing but eternal vigilance and activity can cope with this fraudulent traffic in the hands of the people who have gone into the oleomargarine business.

VALUE OF WHEY.

One of the interesting factors in the development of the dairy industry is the value of by-products. Where cheese is made, the question of the value of whey is of such importance as to represent a big hole in the profits. Whey contains all of the fattening properties of skim milk but none of the flesh forming elements, which is the "casein" taken out by the cheese maker. The "Dairy and Food Review" has been following the question of whey: At many cheese factories the whey is an incumbrance rather than source of profit. It is usually disposed of at almost no price, yet it is of considerable value for pig feeding. The Wisconsin station has determined that whey for pig feeding is worth 7 cents per 100 pounds, and if properly combined with other feeds is worth 10 cents per 100 pounds. The greatest trouble with whey is that it rather demoralizes the handling of the milk supply. As soon as a patron empties his cans he wants to fill them up with milk, and this prevents his cans being washed and steamed at the factory. There are various ways of getting rid of this necessity. One method that is practiced at some cheese factories is worthy of consideration. Pig pens are built far

enough away from the factory to prevent the odor from reaching that institution, but near enough so that the whey can be easily run to them on tram tracks. All the whey is fed at the factory in this way and the profits from the operation go into the general fund. In this way the profits get back to the patrons. There are several advantages about this plan of feeding whey. One of them is that the whey can be fed in better condition than it usually is fed in when it has to be hauled back to the farm. Spoiled whey at the factory is put into cans and is certainly not improved when it arrives at the farm. The cans that convey it are never or seldom properly cleaned and the milk brought to the factory in those cans is injured in quality.

PROFITABLE COWS.

A few years ago the Kansas station had a herd of twenty-eight common or scrub cows. While the average Kansas cow was yielding ninety pounds of butter per annum this herd by good feed and proper care was made to yield 270 pounds. Considerable difference was noted in individual cows. Four cows ran in debt for their feed. Five of the least profitable cows, while they paid for their feed, brought in an income above cost of feed of \$28.30. So far as dairy products are concerned one average cow of the most profitable five lacks only \$2.80 of bringing in as much net cash as the whole five of the least profitable cows.

MILKING COWS IN PORTO RICO.

Some time ago we called attention to the bulletin compiled by Mr. R. A. Pearson, late assistant chief of Dairy Division and issued by the department of agriculture. Here is what he says about the Porto Rico way of milking cows:

The operation of milking is most crude. It is usually done early in the morning. The hind legs of each cow are tied together with a short piece of strong rope to prevent kicking. The rope is necessary in some cases, though very often it is useless, as many cows remain perfectly quiet. Each calf is near its mother, but not allowed to take any milk until it is her turn to be milked. When that time comes the calf's appetite is well stimulated by the long wait and by the short time the breakfast has been almost, but not quite, within reach. The milker releases the calf, allows it to draw a little from each teat, simply to start it, then puts the calf out of the way, and draws in a pail what he considers about three-quarters of the milk in the udder. The calf is then

association will be printed in pamphlet form by the State Board of Agriculture, and may be had upon application to the Secretary, George R. Ellis, Columbia, or C. H. Eckles, Columbia, secretary of the State Dairy Association.

Resolved, That the thanks of this Association be extended to the members of the faculty and students of the Missouri Agricultural College for their hearty cooperation in making this meeting of the Missouri State Dairy Association a success.

Resolved, That a special vote of thanks and appreciation be extended Mr. Levi Chubbuck, the secretary of this Association from his birth, in recognition of his services and his untiring devotion to the good of the Association and in furtherance of the interests of Missouri dairymen; that we regret his absence and the fact that work in other fields has caused the severance of relations with this Association.

Resolved, That the thanks of this Association be extended to Senator F. M. Cockrell and the other members of Congress from this state who supported the passage of the present National Oleomargarine Law, for their loyal efforts in maintaining the integrity of the butter industry against the encroachments of a criminal and fraudulent competition.

Resolved, That it is the sentiment of the Missouri State Dairy Association that an improvement should be made in the facilities offered by the State Fair Association for the display of dairy products at Sedalia. That the Executive Committee be instructed and empowered to communicate with the officers of the State Fair Association and take steps toward the installation of a proper building or space for the adequate display of butter, cheese and dairy furniture.

Resolved, That the gratitude and appreciation of the dairymen be made known to the state legislature in acknowledgment of its public-spirited efforts in furthering the cause of dairymen in Missouri, by the appropriation made for the erection of the dairy building which forms so solid a basis for the growth of scientific dairy methods in this commonwealth.

Resolved, That in order to render effective this appropriation and the building and work for which it stands, the Missouri State Dairy Association earnestly recommends to every dairy farmer, every farmer's son or daughter, and every prospective dairymen, the special benefits and advantages to be obtained by either the regular or the short winter course in dairying which, under the efficient guidance of the professor in charge and the faculty of the college of Agriculture, aided by future appropriations, promises to be one of the foremost departments of technical learning in our whole country.

Resolved, That this Association, through its Executive Committee, petition the legislature for an appropriation of \$3,000 for the completion of the equipment for the dairy building, the original appropriation of \$40,000 having been exhausted in the erection of the dairy building, the stock and veterinary building and the engine and boiler house, except such as is necessary to complete the same and a small sum for temporary equipment.

Resolved, That this Association petition the legislature for a continuance of the annual appropriation of \$3,000 for the prosecution of the work of the department of dairy husbandry.

Resolved, That this Association present a memorial to the state legislature asking for the appropriation of \$4,000 for the erection of a dairy barn that will complement the beautiful and appropriate building already nearing completion, which is to be the home of the dairy school of this state.

Resolved, That the thanks of the Missouri State Dairy Association be due to the officers of the M. K. & T. R. R. for courtesies extended to this Association at this meeting.

Resolved, That a special committee be appointed, known as the World's Fair Committee, to take up with Superintendent Taylor and the Agricultural Committee of the Louisiana Purchase Exposition the matter of a proper representation at the St. Louis World's Fair of dairy interests for the good of the dairy profession in general and the advancement of the dairy business in Missouri particularly; that the committee be authorized to urge the immediate appointment of a superintendent of the dairy division in order that the short time before the opening of the World's Fair on May 1st, 1904, may be utilized in the preparatory work of arranging an exhibit of dairy products and dairy progress that will be an educative force and a credit to the profession and our state and nation.

Resolved, That this Association endorse the candidacy of Mr. E. Sudendorf for the position of superintendent of dairy division of the Louisiana Purchase Exposition, recognizing in him a man of rare executive capacity, of all branches and departments of the dairy business.

C. H. GOODRICH,
F. W. HALEY,
Committee.

ILLINOIS DAIRYMEN'S ASSOCIATION.

Annual conventions in the Illinois State Dairymen's Association have been in themselves sufficient attraction the past years to draw a large attendance. None of the annual conventions of dairymen in other states the past few years have exceeded those in this state in interest and attendance. Results of the regular offerings of an excellent program, a large exhibit of machinery and a good premium fund have been very pleasing; but besides these features, the next convention is to have an additional attraction.

The meeting is to be held January 6-7-8, 1903, at the new agricultural college building, University of Illinois, Urbana and Champaign. Besides being able to attend the convention, the delegates will have the opportunity of inspecting this new college of agriculture, pronounced one of the finest in the country in both construction and equipment.

In the dairy wing of the structure is a model creamery and cheese factory, with cheese curding rooms, ice machines, facilities for bottling milk, etc. Another feature of the building is a large stock judging arena, and both of these are to be made use of in arranging the program.

Prof. Oscar E. B. of the dairy school will give instruction each day of the convention on "Starters," making starters ready to put into the cream.

It is intended also to have instruction each day on farm churning. Other practical features may be added.

A part of two forenoon will be given to the judging of dairy cows by experts

who will use the cows in the college herd for illustration. This feature should appeal to every dairymen of the state. The knowledge he can gain at these practical sessions will be worth the time and expense of attending the convention. A program of papers and addresses on the most advanced topics in creamery and dairy work will be presented. It is expected, too, to devote one session to representatives of the different dairy breeds. Steps were taken last year to interest the breeders of dairy cows more directly in the work of being done by the association, and the hope is that the breeders will join with the dairymen in spreading dairy knowledge.

The state college now has about 200 agricultural students and by January 1 the number will probably be increased to 250. All of these students will be directly interested in the convention and will attend its sessions.

DON'T STOP HAULING MILK.

In the "Iowa Agriculturalist," the college paper of the Iowa agricultural college at Ames, a writer discusses a pertinent creamery proposition as follows:

At this season of the year many farmers are debating in their own mind whether they should stop selling milk to the creamery, or make their own butter. The cows are no longer giving a very large quantity of milk, and many decide not to bother with sending the small amount of milk to the creamery. The housewife says "that the cost of the butter necessary for home use is as great, or even greater, than what we get for our milk, and when we look for our milk check we are rather anxious to find out whether we are in debt to the creamery or not." For some unexplainable reason most housewives always have more confidence in themselves than they have in the butter-maker when it comes to supply the family with the same amount of milk. But the fact is settled forever, that no one can get more good butter from a certain amount of milk, than can an up-to-date creamery butter-maker. If the housewife succeeds in making enough butter to supply the family from the same amount of milk, which, when sold to the creamery would not, it would simply be because she makes a quantity of butter, which suggests this spreading on the bread. If you are delivering milk to an up-to-date creamery, do not stop selling milk, because the quantity is decreasing. It is well to bear in mind that with a decreasing quantity, there is usually an increase in quality, an increase in the price, and the skimmed milk usually comes back on the farm in a better condition.

The milk cows pay well, especially in the winter, when the quantity of milk is less, and the price is higher. The farmer isn't much of anything else to be done on the farm. It is a good idea to have about half of the cows to come in with their calves in the spring, and the other half in the fall of the year, then a good supply of milk can be kept up the whole year around, and when the spring opens up and the cows get on grass, the fresh flow of milk of the fall cows will be renewed and in that way more milk can be obtained from a certain cow and the question whether milk hauling should be stopped, on account of shortage of milk, has been settled.

But Jersey's latest book on Farm Stock and Dairy Work is full of practical things for practical people. The title, how to build and fill; analyze, its value; sell, crop, variety and how to grow, raise, feed, and manage the dairy stock ably treated. Send \$1.00 for copy. Menomoth, Ill.

If a farmer does not know enough to feed and care for his animals so that they don't need physic every few days, he had better read law or go to preaching. The soundest heads of cows are herds where turnips and mash are their only physic.

If you leave any milk in the cow's udder leave the first pint, not the last, for the last pint is some ten times the richest.

The thoughtful dairymen will keep vaseline handy and use it on the cow's teats. This will keep them from chapping and if there are any warts they will disappear.

Those who desire to investigate the merits of the latest and most powerful calf dishwashers should write Geo. Webster, Christiana, Pa., for his catalogue. This gentleman manufactures two of the most reliable dishwashers on the market and will gladly send them on trial to those interested.

THE

Horticulture

HORTICULTURAL TALK.

THE BEN DAVIS QUESTION.—This old favorite, which in the past has made money for the commercial grower than all other varieties put together, is now giving the rounds of a lively discussion as to whether or not it is the variety to plant today. Nine growers out of every ten are not willing to give it up, and, in fact, still place it at the head of their list of market apples.

Nurserymen are particularly anxious to have Ben Davis remain a general favorite for the reasons that it is a nice tree to grow, and so long as it remains at the top of the list, they can grow it by thousands, with little danger of having a surplus on hand; whereas, if the planter should let up on Ben Davis the nursery would be somewhat at a loss to know what varieties to grow on a large scale, and would without a doubt, lose considerable on surplus stock.

The cause of this variety contest was brought about by a few who have grown and marketed along with Ben Davis, varieties of better quality, in quantities sufficient to make that a fair estimate of profit could be made; that is, they have carefully compared the yield, not simply from one or two years crops, but from time trees were set out to the present.

They have made an estimate in the cost of picking the smaller apples which they claim will succeed the Ben Davis, and overlooked the fact that few varieties are so hard handling and keep as well as the old favorites, and finally compared prices which are very much in favor of the high quality varieties.

There is little difference of opinion among those who have lost faith in Ben Davis, as to what one variety to take its place. Many have decided to plant something just a little better in quality than the Black Ben Davis and Gano; and still have something with the general Ben Davis characteristics. Others have decided to plant nothing that looks or tastes anything like it. Of the high quality apples for profit Jonathan seems to stand first, Ingram and Grimes third. York Imperial is preferred by some, but I cannot understand. Tree begins to bear late, fruit is large, coarse, but little better than Ben Davis in quality, often misshapen and cannot be successfully handled in cold storage. Were I to judge this variety question from my observation here in our local market, a city of about 20,000 inhabitants, I would certainly decide against Ben Davis.

There was equal demand for Jonathan, Janet, Winesap and Grimes at 75¢ per bushel, whereas Ben Davis was the worst kind of a drug; in fact, the latter were hard to dispose of at any price, no matter how large or perfect they were. My opinion is that there are growers who will always make the Ben Davis class of apples pay well because they will grow them to the height of satisfaction, and market to the best advantage; but I feel convinced that there are too many being planted.

TIME TO MULCH STRAWBERRIES.—There seems to be a difference of opinion as to the best time to cover the strawberry bed. Some say to do it before freezing weather begins, while others say wait until the ground is sufficiently frozen to bear up a team and loaded wagon.

Why not give the matter a good test this year by covering part of the bed before and part after freezing weather?

STORING BULBS.—Most country folks have, or if not, should have, a collection of tender summer flowering bulbs. If these are not already in their winter quarters they should be placed there at once. One day last week was partly devoted to this work at our place. Our collection consists of 300 Gladioli, 100 Tuberose, 50 Cannas, 25 Tritonias and 25 Dahlias. The Cannas were lifted with considerable earth adhering to roots and placed in a shed where they will partially dry out, and later to be stored in a frost-proof cellar.

The other bulbs were packed in baskets and placed in a dry, warm cellar.

We also placed in cold pits several hundred fine carnation plants, a number of geraniums, tender roses, pansies and other tender plants. We expect to realize much satisfaction from that day's work.

THE WEATHER.—It has been gloomy for several days, not all favorable for shredding fodder, which is being generally practiced in this neighborhood. We look for wintry weather soon.

EDWIN H. RIEHL.
North Alton, Ill., Nov. 19, 1902.

A FALL SET STRAWBERRY BED AND THE AFTER TREATMENT.

Editor RURAL WORLD: The season has been very favorable for the growth of young plants. Our spring set strawberry beds have made thousands of young plants. We had a plot of ground near the old beds that we followed this season and it was in fine condition to receive plants, so we set it to 1,500 plants (Clyde and Brandywine) Nov. the 7th. We stretched a line through the field making the rows 4 feet apart and set the plants 18 inches apart in the rows. The land being moist and cool the plants have not wilted. We think the fall season the best time to set strawberries, provided they are treated right afterwards.

We are now making a compost heap with which to mulch the plants later on. We go under the cedar trees where the fowls have been roosting all summer, rake up leaves from the yard, mixing the leaves with the droppings, leaving all in a heap until the ground freezes. Then haul it to the strawberry bed, putting one shovelful to about every three plants covering the plants so that we cannot see them. Frost will not have a plant so treated. This mulch will add some fertility to the soil with very little, (if any) weed or grass seed. With proper cultivation, hoeing and weeding the runners, there can be a nice market row, also a light crop of berries, but they will be very gritty by the fresh earth caused by cultivation. If the natural grass covers stop during the fall after cultivation stops, they will need no more mulch and will yield a fine crop of clean berries the second summer from planting.

E. W. GEER.
Farmington, Mo.

THE GANO AND BLACK BEN DAVIS.

It is often repeated that "the Gano is the same as the Black Ben Davis," and that this has been said so often and credulously by so many is shown in the serious way in which the matter has been taken up by apple growers and nurserymen. Prof. E. J. Wicks, Horticulturist at the California Experiment Station at Berkeley, California, in an inquiry on this point, has come into the question deep-

HAVE YOU SEEN YOUR NEIGHBOR'S NEW SEWING MACHINE?

A number of Great Five-Drawer, Drop Head Sewing Machines have recently been shipped to families in every town in the United States on three months' free trial. The prices are \$85.00, \$100.00, \$115.00, \$135.00, according to make and style of machine.

If you will mention the name of this paper or magazine, and the section and mail to us, we will send you a free trial of one of these machines, and examine them and convince yourself there are no better machines made at any price. We will also mail you, free, our new special sewing machine catalog, showing handsome illustrations, descriptions and prices of an immense line of machines at \$25.00 to \$125.00, special three months' free trial offer and most liberal sewing machine terms.

A sewing machine trial is said to be forming for the first time in the history of the world. It is accomplished by mail and no supply and no cash is required. You can see the machine in your own home, and if you like it, you can have it at \$25.00 to \$125.00. Our stock is now complete and for catalogue, ask for a 4-page folder you should cut this notice out and mail to us today.

STARS, ROSS & CO., Chicago

ly and carefully. The presence of so many apple growers in St. Louis at this time, in attendance upon the Apple Growers' Congress, makes the following report of Prof. Wicks of special moment. It seems from his investigations that Gano and Black Ben Davis are distinct and well-defined varieties. It should always be remembered that in nature there are no hard and fast lines of demarcation between species or between varieties of the same species. Types of distinct varieties will merge into each other and often cause confusion. This is true in the animal as well as the vegetable world.

Prof. Wicks reports as follows: "Specimens arrived in good condition and have been given much time to their careful examination. A general aspect of both the fruit and of the branch gives the clear impression that the varieties are different; examination of all features usually employed in pomological differentiation shows very strikingly the resemblance; the difficulty of pointing out by descriptive words the distinctions which the general aspect declares to be present, is great. I have, however, prepared such descriptions as follows:

GANO.
Two-year-old wood—Brownish red, nearly free from down; dots few, light yellow, variable in size; growth fair.
One-year-old wood—reddish purple, downy; dots very few, whitish; growth good.
Leaves—sharply serrate; medium size; reverse nearly free from down petiole and mid-rib partly tinged with red; many leaves yellowing at this date.

BLACK BEN DAVIS.
Two-year-old wood—Brownish purple, quite downy; dots few, more uniformly larger; growth vigorous.
One-year-old wood—Reddish purple, dots few, whitish, large; growth large.
Leaves—sharply serrate; medium to large; reverse quite downy; petiole and mid-rib partly tinged with red; all leaves in good color.

FRUIT.—Large; uniformly round ovate; greenish yellow, quite uniformly covered with deep red and purplish red; very dark purple red in the sun, very faint indication of stripes; blanches color very solid and uniform; dense lilac bloom; dots light and rather conspicuous because of dark background; stalk 3-4 inch, quite thick; cavity deep, even, russet on light green, basin wide, deep, obscurely channeled. Calyx large, partly closed, petals irregularly disposed; flesh, white with slight greenish yellow tinge; flavor pronounced sub-acid, inclined to aromatic; superior to Ben Davis.

The following notes may more clearly define the position which I am compelled to take that the two apples are separate and distinct:

In the two-year-old wood the brownish tint and somewhat back of Gano contrasts strongly with the darker tint and the partially retained down of the Black Ben Davis. The current year's growth of the two is quite similar, but the heavier down on the reverse of the Black Ben Davis leaves, separates them again. In the branches sent, the Gano shows a marked maturing some of the leaves, while the foliage of the other variety is still fully green. The fruit of the Gano is also superior, as shown by texture and flavor.

The prevailing form of the fruit is noteworthy. The three specimens of Gano furnished me show wide variability—from roundish ovate to oblong, while my five specimens of Black Ben Davis are almost identical in form, very handsome and round-ovate. Coloring is also very variable in Gano; one specimen would almost pass for a yellow apple due largely to leaf-hatch no doubt; another has faint reddish bluish and the third, showing evident signs of ample sun exposure, has its red color easily distinguishable in stripes and blotches and scarcely any diffused color even on the sunniest side.

The five Black Ben Davis specimens are uniformly colored; dark red running to deep purplish red, almost black in the full sun-diffused colors throughout and scarcely an intimation of either stripes or blotches. There seems also to be a difference in the two apples. Gano seems to have a prevailing yellow with green suggestions, while the Black Ben Davis takes its red on a green base more directly. The stalks of the two are also different; prevalently slender in Gano and uniformly stout in Black Ben Davis. The basin and cavity features are similar in both apples, but the old Ben Davis characters, but Gano is rougher and more irregular in its embodiment of them than is Black Ben Davis.

In flavor, there is a marked difference in the specimens examined. Gano being flatter and less marked than the old Ben Davis as growth in this state, while the Black Ben Davis is clearly better than its prototype. This was evident, although the Gano had apparently the advantage of greater maturity as already stated.

I conclude then from specimens of these two fruits grown side by side in the mountain district of California, which is exceptionally well suited to developing the best there is in apple varieties, that Gano and Black Ben Davis are distinct and different; that the former by its irregularity of form and color coupled with low quality is of doubtful commercial value, while the Black Ben Davis by uniformity of shape, rich, solid color and superior flavor promises to be a profitable market fruit in all districts of the State where the characters shown in the specimens examined can be secured.

MISSOURI STATE HORTICULTURAL SOCIETY.

An interesting event to Missouri horticulturists following close on the heels of the meeting in St. Louis of the American Apple Growers' Congress, is the 46th annual gathering at Springfield of the Missouri Horticultural Society. A fine program and a successful meeting is promised Dec. 2 to 5.

THE AMERICAN APPLE GROWERS' CONGRESS.

The first meeting of American apple growers was held in St. Louis, at the Lindell hotel, Nov. 18-19. This organization is unique, being an independent association of men interested in the apple industry. There are no branches or local organizations. At this first session 125 members were enrolled, which speaks well for the enterprise of this class of horticulturists and is a silent hostage for the ultimate usefulness of the organization. The officers chosen for the coming year are as follows:

Senator H. M. Dunlap of Savoy, Ill., president; W. R. Wilkinson of St. Louis, vice president; T. C. Wilson of Hannibal, Mo., secretary; Wesley O'Fen of Des Moines, Ia., treasurer; Prof. John T. Stinson of Mountain Grove, Mo., official statistician. The following were elected state vice presidents: A. T. Erwin of Iowa, George R. Keill of Ohio, A. D. H. Miller of Ohio, W. C. Rud of Indiana, Louis Erb of Tennessee, George Woolsey of Arkansas, W. F. Flournoy of Missouri, William H. Barnes of Kansas, C. H. Williamson of Illinois, and S. W. Moon of West Virginia.

The occasion of this apple growers' congress was explained at the annual Shaw banquet, held Wednesday, the 19th, at the Mercantile club, many of the prominent members of the congress being present in sufficient numbers to make it "Apple Growers' Night."

During the morning session of the first day several papers on topics of interest to the growers were read. The first was one on "Soils," by Prof. C. W. Hopkins of Urbana, Ill. He dealt with conditions and properties of soil effective, particularly in the culture of apple orchards. Following his reading an open discussion of the subject was participated in by George T. Tiffin of Springfield, Mo., J. W. Stanton of Richview, Ill., W. R. Wilkinson of St. Louis, F. P. Verdon of Ohio, and P. T. Quinn of New Jersey.

Following the morning's session most of those attending busied themselves in arranging their apple exhibits on tables provided in another apartment.

The afternoon session was opened by a paper read by President H. M. Dunlap. He gave an interesting and elaborate outline on "Planting and Cultivating During the First Five Years." A discussion of the subject followed his reading, in which the following growers participated: L. A. Goodman of Missouri, A. V. Schermerhorn of Illinois, B. W. Moore of West Virginia, C. J. Tyson of Pennsylvania and M. J. Wragg of Iowa.

"The Care and Cultivation After the First Five Years," was the subject of a paper read by Mr. M. T. Flournoy of Marionville, Mo. Messrs. J. E. Jolly of Illinois, J. C. Evans of Missouri, Wesley Greene of Iowa, J. T. Logan of Arkansas, T. B. Wilson of New York and John W. Woods of Virginia followed the reading with a discussion. In all the day's discussions all members were privileged to put questions.

The subject "Fungi," at the morning session of the second day was discussed in which the following participated: Prof. J. T. Stinson of Missouri, Prof. J. C. Blair of Illinois; Prof. J. C. Whitten, Missouri; Prof. S. A. Forbes, Illinois, and Samuel H. Dickson, Tennessee. "Insects" was the subject of a paper read by Prof. Lawrence Bruner of Nebraska. The following growers participated in the discussion which followed his reading: Miss M. E. Murtzell, Missouri; Prof. McKee, Illinois; Prof. G. H. French, Illinois; Prof. J. M. Steadman, Missouri, and William Miller, Ohio. "Facking and Marketing," was the subject of a paper read by Prof. H. W. Wilkinson of Illinois, was followed by a discussion by Wm. H. Barnes of Kansas; A. T. Nelson, Missouri; R. Newhall, Illinois; N. G. Gibson, Illinois; G. C. Richardson, Kansas, and U. T. Cox, Ohio.

The apple display, which is in charge of Mr. W. R. Wilkinson, President of the State Board of Agriculture, was very fine and includes specimens of all well known varieties, besides several new ones. The exhibits were arranged along tables, each designated by placards bearing the name of the state in which the specimens were grown. An especially interesting group was that of the Arkansas apples, a collection for the first time ever placed on display. The Arkansas apples were grown for the greater part in Greene county, and are composed of big Ben Davis, mammoth black twigs and Arkansas blacks. The Arkansas blacks attracted more attention than any other variety. While not as large as the mammoth twigs or Ben Davis varieties, they are of splendid quality. In appearance they are very dark red, sometimes almost black, have a smooth skin and are uniform in shape and size. Some had burst open, the cracks exposing the luscious interior. Growers say that it is a common occurrence for these varieties to ripen perfectly and then split. Along the cracks juice from the ripened fruit gathers and forms a syrup.

In all, there were forty distinct varieties of apples shown, and, in addition, a large collection of specimens of other fruit not open for awards. Apples kept for two seasons and which are, to all appearances, perfect, attracted considerable attention and comment. The rules of competition in the premium contest provided that each variety displayed should consist of a plate, consisting of five apples. For the best and largest display by one grower, first, second and third prizes of \$30, \$20 and \$10 were offered. In addition, forty-five first prizes and forty-five second prizes were offered for the best plates of each variety category. Three sets of judges are to be appointed to pass on the displays and award the premiums.

St. Louis is again to be honored by the convention, and while no definite dates for the convention were decided upon, it will be held on two of the days intervening between the 14th and 15th of next November. Resolutions of thanks were extended to the various committees, the hotel management, and also to the members of the organization who responded to the convention invitation.

A resolution volunteering support and vouching for exhibitors for the Louisiana Purchase Exposition was adopted by the convention. Senator H. M. Dunlap was appointed a representative of the organization and authorized to act for the body in securing pure food legislation. Provision was made for paying his expenses while attending either state or national

conventions held for the furtherance of pure food laws.

The convention extended thanks to W. R. Wilkinson, superintendent of the exhibits, for the manner in which he had conducted the same, and for impartiality in awarding premiums. It was due to his efforts that the exhibit and prizes were made possible, and at one time or another nearly all the growers personally thanked him for his work.

The awards were made as follows: First prizes designated by blue silk ribbons second by red ones, all ribbons bearing in gilt letters the words "American Apple Growers' Congress," the place and date of the convention and a miniature apple.

For the best and largest display of apples by one grower, three prizes of \$30, \$20 and \$10 were given. These were awarded in their respective order to: B. Stuart, Altoona, Ia.; A. T. Nelson, Lebanon, Mo., and George Woolsey, Bentonville, Ark. A plate of apples was composed of five specimens, the prizes for each plate being awarded on the merits of the collection. The awards were made in the following order:

Ben Davis—W. A. Young, first; J. M. Rogers, second.
Jonathan—A. D. Robinson, first; H. W. Jenkins, second.
Huntman—H. W. Jenkins, first; B. W. Steiman, second.
Willow Twig—W. A. Young, first; H. C. Cupp, second.
Grimes Golden—A. F. Pitt, first; U. T. Cox, second.

Shannon Pippin—George Woolsey, first; no second.
Mammoth Black Twig—H. D. Carroll, first; L. C. Thompson, second.
Minkler—A. T. Nelson, first; W. A. Young, second.
Winesap—A. T. Nelson, first; I. D. Snedeker, second.
Little Romanita (Gipin)—A. T. Nelson, first; G. A. Shepard, second.
Large Romanita (Pannock)—G. A. Shepard, first; W. A. Young, second.
Jennette—W. A. Young, first; H. W. Jenkins, second.

Foote Bellflower—A. T. Nelson, first; J. D. Snedeker, second.
Northern Spy—A. T. Nelson, first; B. Stuart, second.
Maiden's Blush—B. Stuart, first; W. Plummer, second.
Roman Beauty—J. D. Snedeker, first; C. W. Steiman, second.
York Imperial—H. W. Jenkins, first; A. T. Nelson, second.
Smith Elder—A. T. Nelson, first; J. A. Briggs, second.
Clayton—A. T. Nelson, first; G. A. Shepard, second.
Allan—G. A. Shepard, first; no second.
Lady Apple—J. D. Snedeker, first; C. C. Bell, second.

Vanderberg—G. A. Shepard, first; no second.
Pennsylvania Red Struck—A. T. Nelson, first; no second.
Gano—S. R. Walker, first; D. A. Robinson, second.
Ingram—A. T. Nelson, first; George Woolsey, second.
Fawcette—B. Stuart, first; W. Plummer, second.
Fawcette—B. Stuart, first; H. C. Cupp, second.
Wolf River—B. Stuart, first; G. A. Shepard, second.
Wealthy—B. Stuart, first; W. Plummer, second.
Shackelford—A. T. Nelson, first; Clarkeville, second.

Holmes Pippin—A. T. Nelson, first; no second.
Baldwin—A. T. Nelson, first; no second.
Missouri Pippin—S. R. Walker, first; A. F. Pitt, second.
Arkansas Blacks—L. C. Thompson, first; no second.

Oak or Nixolite—H. W. Cook, first; no second.
McKee—A. T. Nelson, first; George Woolsey, second.
Albion Pippin—First in dispute; A. T. Nelson, second.
Collection of Crabs—G. A. Shepard, first; no second.

BANKING UP FALL SET TREES.

With those who have tried banking up the trees which they have set in the fall, no word of argument is necessary to convince them that it is time well spent; but there may be those who do not think it a matter of much importance. It should be remembered that a tree that has not had time to grow after being transplanted and thus secure a good hold upon the earth by its roots, is not in a natural condition and of course not always able to safely endure the first winter, especially in a cold or changeable climate. There is a constant draft upon the vitality of the tree through the evaporation of the water in the sap of its stem and branches. This must be replaced by water from the soil taken up by the roots, and the drier the climate or the season, the greater the need, says "Rural New Yorker."

If the earth is piled up against the stem of the tree a foot or more high, it will greatly lessen the evaporating surface exposed and prevent the loss of sap to a corresponding extent. It will also keep the soil next to the roots moist rather than it would be left at its natural level. And if the tree is pruned back somewhat, as it usually should be, there will be a still less chance for evaporation. This bank of earth will also keep the tree from being shaken about by the winds much less than if it were not there, and we will keep a newly planted tree as little disturbed as possible until its new roots are grown. The firmer the bank is packed the better, for it will set closer to the tree and roots than if very loose.

In the spring the mounds may be leveled down.

ed down after growth has well started. Cultivation will necessarily work them down to about the natural level by mid-summer.

FERTILIZERS IN HORTICULTURE.

All things considered, well-rotted barnyard compost is most in favor for use on ordinary soil, though there are conditions under which other fertilizer is more useful. Mrs. H. W. Woodward, in "Ohio Farmer," says: When soil is heavy and cold and perhaps too stiff to handle easily, an application of manure will help to loosen it up and also warm it from the decomposition of the material. Light sandy soil, which during the growing season, is inclined to be too warm, thus forcing the vegetable growth too fast, would not be benefited by the use of table compost, but requires chemical fertilizers and a heavy application of vegetable matter either from growing crops plowed under or dead leaves and litter from the garden, applied in the fall.

When nitrogen is most needed, hen manure judiciously used will prove the best fertilizer, as it contains when fresh twice as much nitrogen as the same weight of stable compost, and when dry it contains four times the amount. It must be used with caution, being well mixed with soil, or it will burn up anything planted in it. Many gardeners compost it with loam, ashes and dead leaves, and when it is well rotted apply it broadcast, afterwards plowing it under.

Soil which has been used for garden purposes for years often contains too much potash in proportion to other kinds of fertilizer. It comes from regular applications of stable manure, which contains little nitrogen. The nitrogen is quickly taken up by the plants and a certain amount of the other elements is used but as much more nitrogen is needed in proportion to account of its causing the rank growth of leaves and stalks, the result is that a better balanced ration should be provided for the soil. An occasional green crop of clover, legumes or even weeds, will add much to the fertility of the soil, furnishing much nitrogen which the plants have gathered from the air and causing the soil to be more open and porous, allowing free access of air and moisture.

Especially is this plan of use on sandy soil, and such crops should be sown as soon as the garden crop is gathered and be plowed under in late fall or early spring. When dry, commercial fertilizer is used, it is found hard to apply, as it is light and the wind carries it in every direction. If dampened slightly it can be handled easier, and can be applied by hand or by means of a fertilizer drill made for the purpose. Field crops can mature without extra fertilizer being given if the ground has been suitably prepared for planting, but often in the garden it is well to provide plant food occasionally during the growing season. Some vegetables seem to do better with the soil only moderately rich at planting, and a light application of fertilizer in either solid or liquid form at intervals during the season keeps the crop in the best possible condition.

Dry hen manure, scattered on top of the ground around the roots of melon, cucumber, squash and pumpkin vines and in the flower garden among the asters will show beneficial effects in a very short time. Wood ashes and hen manure make a good combination of potash and nitrogen for such use, but should not be mixed together, as the combination frees the ammonia and it is lost in some argument, should be used in two separate applications, and good results be obtained.

FALL PLANTING CHERRIES.

Fall is the best time to plant cherries. My opinion is that an acre of cherries of the right varieties properly managed, will be as profitable as the same ground planted to apples or peaches, says the "American Horticulturist."

The first thing to consider is a suitable location. The best soil is a light loam that will retain moisture well during the summer. It is useless to plant a cherry tree on low or wet land unless well drained, and in fact it is not desirable to locate an orchard on low land, even if it has been well drained, as there is more danger from frost than on high ground.

The ground may be prepared for cherries by cultivating deep and plowing under a crop of cowpeas and clover, or planting a year or two in advance of planting cherries. This will enable the soil to retain moisture much better and put it in much better condition for cherry growing than it would otherwise be. I would set trees about eighteen feet apart each way and cultivate them thoroughly for at least four or five years. I find that it will pay to cultivate after the trees begin to bear, although it has been the practice of most cherry growers to seed to grass after three or four years. Cherries are benefited as much by cultivation as apples or any other fruit.

A TOAST.

The harvests are gathered,
Of orchard and garden.
Of vineyard and field.
So here's to Thanksgiving!
May everyone do his best,
On the part of the land
And the fruit of the vine.

The Apilary

PROFIT IN BEES.

The inquiry of how much profit there is in bees is of frequent occurrence. The lack of knowledge in handling bees and the value of the bee as a money producer is astonishing. Very few persons know whether a hive of bees will produce a dollar's worth of honey in a season or

not.

For quickness of disposition and wide-awake business the Italian bees are not excelled.

Many superannuated queens, toward the last of their career, lay eggs in the worker cells which produce only drones. The hives left on the summer stands should have protection of some kind against winter winds.

To prevent robbing as far as possible close the entrances to the weakest colonies so that only one bee can pass in at a time.

Having a good force of young bees to go into the winter is as important as anything connected with the fall management.

Have plenty of young bees and plenty of stores in the hives to carry them through until the honey season opens in the spring.

MRS. HELENA BLAU,

Young Milwaukee Society Woman.

Thousand cured women have written to tell how Wine of Cardui bestows the blessing of health on every woman who takes it, rich and poor alike. Mrs. Helena Blau, No. 123 Seventh Street, Milwaukee, Wis., is one of the young women whom Wine of Cardui has rescued from a life of suffering. She writes:



The woman who has suffered from female weakness should do anything within reason to secure health. Wine of Cardui is the medicine that appeals to reasonable women—women who hold operations and cutting in horror—women who know that Nature is the best physician. Wine of Cardui gives women back their health by giving Nature a chance to build up the wasted and diseased tissue. Wine of Cardui regulates the menstrual flow and Nature, when relieved of the drains or of the poisons in the system, makes the functional organs strong and healthy again.

"Wine of Cardui is certainly 'worth out' women's best friend and I am pleased to give my experience with it. A few months ago I caught a severe cold, having been out in inclement weather, which settled all over me, particularly in the abdomen. I was in almost constant pain. I consulted a physician and took his medicine for a month and without any relief. I then decided I would try your medicine and it was a lucky day for me when I did so. I noticed a change in a few days and felt encouraged to continue taking Wine of Cardui, and my patience was rewarded, for in two weeks my pains had left me and I felt like a new woman."

Any woman who is silently suffering untold pains because she is too sensitive to undergo a physician's examination and treatment can find no excuse for not securing relief when Wine of Cardui is offered to her. There is no publicity to deliver her. She can take Wine of Cardui in the privacy of her home, with as much assurance of a final cure, as though a dozen doctors recommended it. Many physicians do recommend Wine of Cardui to their patients.

Why not get a \$1.00 bottle of Wine of Cardui from your druggist today?

WINE OF CARDUI

A million suffering women have found relief in Wine of Cardui.

"Invincible, Unsurpassable, Without a Peer,"

Writes a regular subscriber, who has read it for many years, of its Twice-a-Week issue of the

St. Louis Globe-Democrat

and this is the unanimous verdict of its more than half a million readers. It is NEWSPAPER ALL COMPARED, the biggest best and cheapest national news and family journal published in America. It is STRONGLY REPUBLICAN in politics, but it is above all a NEWSPAPER, and a NEWSPAPER is what we need most in this time of rapid change and uncertainty. It is UNDEFEATABLE in the time to read a leading article, a well-chosen story, a long list of well-selected reading matter makes it an INVALUABLE HOME AND FAMILY VALUE.

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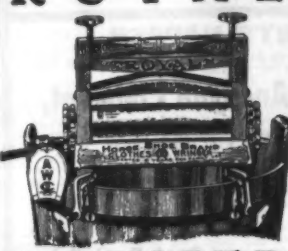
FOR SALE OR EXCHANGE—100 acres, 20 improved, 40 tame meadow, balance timber; fine house, new frame house (good condition); new barn; bearing orchard; all kinds of fruit, shrubbery; no incumbrances; title perfect; good stock (farm); 3 miles from country town. Price \$12,500. Box 144 Hartsville, Mo.

I Can Sell Your Farm
to better value than any other. Send description, map price and name of owner to Wm. A. Ostrander, 1606 N. 4th St., Philadelphia.

Otwell's TREE PAINT
for 7 years has grown in favor. Millions of trees saved from rabbits, deer, and other animals. It costs nothing for the paint, but it saves the tree. The best thing in the world for fruit trees, and you will see to it. Write W. A. OTWELL, Patented, HARTVILLE, Mo.

A colony protected in a good chaff hive will not consume near the amount of honey that one will if sitting out in an ordinary hive

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Are the best Wringers made. The rolls are of the finest quality Para Rubber, which last long, wring dry and save the clothes and buttons. They have the Patent Guide Board which spreads the clothes and catches the water. The Horse-Shoe Warranty Card is attached to the Horse-Shoe Warranty Card.

THE AMERICAN WRINGER CO.
99 Chambers Street, New York

Home Circle

Written for the RURAL WORLD.
THANKSGIVING.

To thee, oh Lord, our hearts do we uplift
In praise and adoration for thy gift
Of grace, that like refreshing dew de-
scends
Upon us in a desert place and blends
Our lives with thine. Thy holy name we
praise
For blessings that attend us all our days.
Thy tender mercies, Lord, that fall like
showers
Upon the earth to bless these souls of
ours.
Are rich in heavenly grace, and humbly
we
Ascribe the adoration of our hearts to
thee.

Not only have we tasted that the Lord
Is good, not only has thy precious Word
That emanated from the courts above—
First revelation of thy wondrous love—
Sustained us in our pilgrimage, and fed
Our hungry souls each day with heav-
enly bread,
But we have also been recipients
Of blessings that sustain these earthly
tents.

The beautiful earth whose fullness is
thine own
Has yielded fruitfully where we have
sown
Or reaped where other hands have scat-
tered seed,
And thus supplied us with each daily
need.

But not alone for what thou hast be-
stowed
On us, dear Father, but for what hath
flowed
O'er all the land for all the people's good,
Do we return to thee our thanks, and
should
Each yield to thee his earthly all, the
price
For all thy mercies, Lord, would not
 suffice.

We thank thee that our homes and na-
tive land
Are resting in the hollow of thy hand,
Secure from all the adverse winds that
blow,
A goodly land where peace and plenty
flow.

And far transcending every other gift
That hath redounded to our good, we lift
Our hearts in grateful praise for him who
died

On Calvary's cross by sinners crucified,
That we, through Him, might live for-
evermore
With thee upon fair Canaan's blissful
shore.

We thank thee for thy dwelling place on
earth,
The church, where sinful man receives
new birth
Into the everlasting fold of Christ—
For promises of life that hath sufficed
For ages past to anchor souls to thee
Our hope, our life, our immortality.

WALTER S. WHITACRE.
Mt. Vernon, Ill.

Written for the RURAL WORLD.
COMMON SENSE AND THE FOOD
QUESTION.

By Jane A. L. Zabrickie, Instructor in
Household Economics, State University,
Columbia, Mo.

When our best friend declines our invita-
tion to dinner on the ground that he
has given up eating regular meals, and
is taking instead "food tablets," we won-
der to what we are coming.

Surely, this is the era of the Food Fad-
dler and within the past few years we
have been guilty of an alarming rate.

For instance, we are told by him that
red pepper is essential to our health and
happiness. Accordingly we dutifully buy
a pound or two and proceed to aneak and
choke and strangle over hot to-
males and other dishes from the Hades
Menu, politely called "Mexican" and "In-
dian."

After a year of this inflammatory sort
of life we are told by the Second Food
Faddist that pepper of all kinds is most
injurious; instead we are implored to eat
salt, and when we read the astounding
statement that by depriving large quan-
tities of this substance, "Our bodies are
kept in perfect electrical equilibrium, we
are duly impressed with the awful vague-
ness of the remark, and immediately we
begin a briny diet which if kept up in-

There is more Catarrh in this section of
the country than all other diseases put
together, and until the last few years
was supposed to be incurable. For a great
many years doctors pronounced it a local
disease, and prescribed local remedies,
and by constantly failing to cure with lo-
cal treatment, pronounced it incurable.
Science has proven Catarrh to be a constitu-
tional disease, and, therefore, requires
constitutional treatment. Hall's Catarrh
Cure, manufactured by F. J. Cheney &
Co., Toledo, Ohio, is the only constitu-
tional cure on the market. It is taken in-
ternally in doses from 10 drops to a tea-
spoonful. It acts directly on the blood
and mucous surfaces of the system. They
offer one hundred dollars for any case it
fails to cure. Send for circulars and tes-
timonials. Address
F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, etc.
Hall's Family Pills are the best.

definitely would bring us to feel like a
pickled mackerel.
Before this time comes, however, our
attention is arrested by F. F. No. 2, who
declares at the rate of a penny-a-line in
the "County Chronicle" that if we
would live on raw beef and water we
would have glowing complexions and
wonderful intellects.

The following week the rival paper, the
"County Trumpet," informs us that only
by turning our dinners and suppers into
anesthetic nibbles at lettuce, peanuts,
nasturtiums, etc., in general—"The Great
Uncooked"—can we make our bodies meta-
bolic and proper. Now the former menu is as
nectar and ambrosia to bacteria, and the
latter makes up a cheerful diet for rab-
bits; but we are neither bacteria nor
rabbits. We are intelligent men and wo-
men, masters of all the foodstuffs of the
world.

A kind Providence has given us untold
varieties of foods in the sea, the field,
and forest. It behooves us to find out
about them, and to use them to the best
advantage, enjoying them and taking
pride in their proper preparation.

The most important thing to know
about a food is its nutritive value. There
is the greatest error in the minds of most
people regarding the two terms "nutri-
tive" and "digestible." The "nutri-
tive" means the actual amount of real
food in the article. Although water is
essential to a dietary it does not nourish
the body and is therefore not a food.

Oysters then, which are 90 per cent wa-
ter, are low in nutritive value. "Digesti-
ble," on the other hand, may mean either
of two things: First, the ease or quick-
ness of digestion; second, the amount of
the nutritive portion of the food which is
finally digested and made available for
the use of the body.

It can be readily seen that this latter
depends upon the individuals' digesting
powers, and is therefore variable. It is
usually referred to as "availability,"
while "digestibility" in common parlance
implies the former meaning, or functions
of digestion. Oysters digest easily. For
this reason they are suitable for invalids
and people with weak digestions, al-
though they contain little nutriment.

Beans contain more nutriment than
most vegetables. A plate of beans consti-
tutes one of the most nutritious lunches
which can be bought for fifteen cents;
but owing to the toughness of the out-
side leathery envelope, beans are difficult
of digestion, and are not suitable for
people who stay in the house and do lit-
tle manual work.

Ordinarily, clear beef tea contains no
nutriment. Tender beef, rarely cooked,
is both nutritious and digestible. Tough
beef, although less digestible, is equally
and often more nutritious.

Besides the nutritive value and the
availability of foods, many of them are
also a medicinal value, which affects the
individuals in different ways, and it is this
which causes the general uncertainty,
and gives such a wide opening for the
food faddists and the patent food man-
ufacturers. It is certainly a fact that
strawberries agree with some people and
disagree with others. The same thing is
less noticeably true of lemons, and many
other fruits. Some people are most pain-
fully affected by a small dose of quinine.

It is evident that our physical idiosyncras-
ies are numerous and perplexing indeed.
The food question of the future, involves
the study of the part of physicians as
well as of chemists.

The only way out of the difficulty
seems to be for us to choose a diet of
good fresh foods, cooked in an appetizing
and digestible manner. If you find by
experience that a certain dish does not
agree with you, give it up, quietly and
in the future, remembering that the
question of whether eggs do or do not
agree with you is not an absorbing topic
to your friends.

Do not believe the items constantly ap-
pearing in our cheap journals, encourag-
ing food fads.

A corn of quack food may "make flesh
and blood" as it is advertised to do, but
the chemist may tell you that good bread
would make it just as fast, and much
cheaper.

The introduction of patent cereal foods
has made a great improvement in our
diet. A cereal food is not as nutri-
tious as they claim to be, but they
are all good, and when thoroughly cooked
are digestible. Cereals should form the
basis of a child's diet.

Eat just a little more fruit than you
can afford. It is cheaper than doctor
bills—but have it fresh and in good con-
dition.

We should all drink more water than
we do, and if we will insist on eating rich
food, we must have plenty of outdoor
life. Although the fibre which makes
meat and vegetables tough, is not digesti-
ble, it gives bulk to our meals, stimulat-
ing the muscular activity of the digestive
organs, which aids digestion and brings
about laxative results.

But because you eat up late for a week,
and took little outdoor exercise and then
became ill on Sunday with a headache,
do not feel called upon to relinquish for-
ever the cured and sponge cake which
you ate on Saturday night.

On the other hand, remember that nine
out of ten headaches do come from er-
rors in diet, but the error is usually re-
garding our diet in general. We are all
too fond of rich food and complex dishes
and condiments. This is where we need
to reform. Savarin is a "sinner," "To-
me what you eat and I will tell you what
you are," but we must be conservative
about attributing our ills to a specific
food.

Above all, let us investigate this sub-
ject of foods. Find out what dishes are
kept in season. To make this pickle
take one gallon of green tomatoes, chop
fine, mix with them half a cup of salt,
let stand over night, drain, wash, then
add half a gallon chopped cabbage, six
large onions and six green peppers, also
chopped fine. Put a quart of vinegar in
the preserving kettle, add two quarts of
brown sugar, a dessert spoon of ground
mustard, scant teaspoon of tumeric, a ta-

blespoon each of ground cloves and all-
spices, two tablespoonsful of ground cin-
namon, mix and tie in a cheese cloth and
put them in the vinegar. Then add the
mixed tomato, cabbage, green pepper
pods and onion and boil clear, stirring
frequently.

Spiced vinegar is excellent either sweet
or sour for cucumbers that have been
preserved in salt. Boil the salt almost
entirely out of the cucumbers, then put
them in spiced vinegar and let them boil
until they are well cooked but not soft,
they will stay plump, are crisp and ex-
cellent.

Fruit Preserves are not easy to make
unless the fruit is in just the right con-
dition. To preserve the hard pears, I
boil them first in water made slightly
sweet, then drain and put them in a sy-
rup made by taking two quarts of sugar
is a point of water, a few pieces of gin-
ger root adds to the flavor of pear pre-
servings, boil until clear and can in self-
sealing jars.

"Mrs. Mary Anderson" has the best re-
cipe for spiced peaches I have ever seen.
Will she kindly give it to the circle?

Appropos of cooking receipts, I recently
learned a new way to make a meat roll,
delicious and economical. Three pounds
of beef and half a pound of pork chop-
ped very fine; mix, season to taste with
pepper and salt, then take half a
loaf of stale bread, cut in small pieces,
pour boiling water over it, cover and let
steam soft, mix with the meat when cool,
form into a loaf, put in a buttered pan
in a cup of boiling hot water in a
baking dish, in a moderate oven two hours,
basting two or three times, and adding
hot water if necessary.

A cake recipe that we use often is
both economical and excellent. Take one-
fourth of a cake of Baker's Chocolate,
shave fine, add half a cup of sweet milk,
one cup of sugar, put on the stove and heat
until the chocolate is dissolved and the in-
gredients well mixed, take from the
stove and when the mixture is slightly
cool add the well beaten yolk of one egg,
a teaspoon of vanilla extract and a tea-
spoon of soda, beat well, then add water
and other half (scrap of sweet milk and two
cups of unsifted flour, bake in two layers
and put together with icing made as fol-
lows: Two cups of sugar, half cup of
boiling water, boil until somewhat brittle,
then pour gradually into the well
beaten whites of two eggs, beat until
thick, pour the mixture with a teaspoon of
vanilla and put the mixture between and
over the cake.

I do not know why I dislike to give re-
cipes unless it is because it seems egot-
istical, and because there are so many
excellent cook books to be had for so
little money. I am considered a good
cook, and pride myself on my culinary
ability, but when I write I like to be
away from the kitchen both in mind and
body.

MAY MYRTLE.
Written for the RURAL WORLD.
THE UNION VETERANS.

In the dark days of the civil war, when
disaster and defeat was the rule, and a
dark cloud of gloom and doubt hung like
a pall over the loyal states, when the
perpetuation of the Union trembled in the
balance, thousands of the young men ral-
lied around the old flag. They came from
the cities, villages, hamlets, from the
rural cross roads, from every vocation of
life—a mighty army, representing the in-
telligence and sinew of the land.

"They answered to the call as no other
army was ever before mustered," they
gave the best years of their lives, end-
ured hardships and privations, from the
death in every form, encountered perils
almost beyond description, much of which
has been told in story and in song, that
the Union might survive, that the fact
of the permanence of a free republic
might be established through all the ages
yet to come.

The heritage of liberty now enjoyed in
this "Land of the Free," is the direct
result of the work that they accom-
plished. The civil and religious privileges
vouchsafed to the American people, the
perpetuation of the best government and
the greatest republic that the world has
ever known, crowned by the folds of Old
Glory as it waves to the breeze, is the
grandest achievement of any age or of
any people.

The remnant of that grand army are
now verging closely onto the last roll
call—

"The ranks grow thinner. Day by day
We hear the funeral chant;
The gallant veterans, one by one,
Follow their leader, Grant.
The drums are muffled now
Upon the last redoubt,
And where the bugle's notes are still
The boys lie mustered out."

Only a few more years and the last of
the gray-haired veterans will have passed
away; the last legion will have been
sung, and those who followed Hooker,
Hancock, Burnside, Meade, will be heroes
mustered out—

"Methinks I see the last camp-fire
Blaze up against the sky.
The angel leads the last brave name
To the deathless roll on high.
They're gone! but in vision fair
I see the ranks of blue
That march in glorious columns
In Jehovah's grand review."

But their works will live after them;
the fruits of their victory in more
strongly cementing the bond of the
States; its beneficent influences will be
felt and realized by all the generations
yet to come—

And millions yet unborn will see,
That glorious Banner of the Free,
and remember with reverence the valor
and sacrifices of the Union veterans that
gave to them so great a heritage.

DYKE.

Written for the RURAL WORLD.
PICKLES AND PRESERVES.

Now is the time of year when pickles
of all kinds are made and put away for
winter use. I do not know why we seem
to need acid in our blood in winter more
than at other seasons of the year, but it
is a fact. People who will not touch a
pickle of any kind in the season of ripe
fruit, will eat them greedily when cold
weather comes.

Chow Chow is a good appetizer when
meat dishes are more in evidence than
they are in summer. To make this pickle
take one gallon of green tomatoes, chop
fine, mix with them half a cup of salt,
let stand over night, drain, wash, then
add half a gallon chopped cabbage, six
large onions and six green peppers, also
chopped fine. Put a quart of vinegar in
the preserving kettle, add two quarts of
brown sugar, a dessert spoon of ground
mustard, scant teaspoon of tumeric, a ta-

blespoon each of ground cloves and all-
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ability, but when I write I like to be
away from the kitchen both in mind and
body.

MAY MYRTLE.
Written for the RURAL WORLD.
THE UNION VETERANS.

'TIS FOLLY TO BE WISE.
[An American scientist has come to the
conclusion that the tendency of too much
education or intellectual development in
women is to make them lose their beau-
tiness.]

Phyllis, no task to me was sweeter
Than, grasping my enthusiastic quill,
To hymn your charms; erratic though the
metre.

It gained in fervor what it lacked in
skill.
But now, alas, those charms are like to
vanish.

Without perambulatory duty hide me speak.
The rumor runs that you are learning
Spanish.
And also—simultaneously—Greek.

Those eyes, to which I loved to dash off
stanzae,
No longer gaze, as erstwhile, into mine;
They're fixed on Quixote's deeds, or
Sancho Panza's.

Or rest upon some Aeschylean line.
Or, as you spell Thucydides his speeches
Your face assumes a look of care and
pain.

O Phyllis, heed the moral that it teaches.
And cease to run the risk of growing
plain.
Shun, I implore, the vampire, Education.
Be guided by my excellent advice.
You owe a solemn duty to the nation—
Simply to give your mind to looking
nice.

Learning may be acquired, but beauty
never;
Dry books, believe me, were not meant
for you.
Be fair, sweet maid, and let who will be
clever;
If brains are wanted, I've enough for
two.

FASTING FOR HEALTH'S SAKE.
We all eat more than we require, and
this daily repeated superfluity tends to
enfeeble the system. The production of
society meals were more irregular and
the amount of food tallied more with the
effort expended in obtaining it. Now we
eat because it is a meal time; too many
of us eat not by rule but to repulsion;
while probably all of us eat again before
we are really hungry. Day after day a
little more is taken than is used, and this
excess either disturbs the liver or teases
the stomach, or, circulating in a hyperplas-
tic blood, leads to torpor, or sometimes is
put by—out of harm's way for the time.
But much to the distress of the patient
later on—in the form of fat. Thus we
never have an opportunity of striking a
proper balance between intake and out-
put, unless we follow the wise maxims of
the church and fast once a week, not
merely abstaining from the more tooth-
some delicacies, but fasting honestly,
even to emptiness and discomfort.—From
the London Hospital.

Mothers will find "Mrs. Winslow's Soothing Syrup"
the best remedy for Children's Teething.

THE BEGINNER.
Editor RURAL WORLD: There are
two reasons for the great interest man-
ifested in raising poultry in this section—
the advanced price of poultry and eggs
and the World's Fair. These factors ex-
plain why many a home will add to it a
poultry yard with its houses and sheds,
its bright new appliances, a full stock of
the latest foods and condiments to coax
the flock of lively hens to pay abundant
tribute to the egg basket. The would be
poultryman, having no knowledge of the
subject, diligently reads all the poultry
books and magazines he can secure, and
thinks he knows it all. He is well equipped
to make a great success. No greater
mistake, however, was ever made. It is an
undoubted fact that the knowledge nec-
essary to successful poultry produc-
tion is harder to acquire than in almost
any other pursuit.

The only practical way to secure this
knowledge is by one's own experience and
the experience of others. Our advice to
the future poultry producer is to visit
every poultry point, large or small, he
can reach, and if possible spend some
time on a "chicken ranch" to learn at
the rudiments of the business. Ex-
perience is the best teacher, and even
though its tuition charges are al-
ways high. Whatever you do, do not be-
gin the business extensively. It is far
better to begin with a pair of fowls than
with one hundred. Let the amateur
"make haste slowly" by making poultry
keeping a side business. He can learn
something of the business. Don't "put
all your eggs in one basket." Only when
one has taken a small flock through two
or three seasons and tested, first his love
for the work and second, whether or not
he has made money, can he safely ex-
tend his business. It is a prevalent among
"those who don't know" that one can
make money running a poultry plant and
it is this idea that prevents an over-
supply of eggs and poultry and that gives
them a good price.

In law, medicine or any of the profes-
sions, a man has to study for years be-
fore he can practice. In poultry raising
it takes years to come to the front; the
successful manufacturer usually comes from
the workingman's bench and yet men
think they can go into the poultry busi-
ness without capital and no experience
and make money from the start.

Raising poultry is a business and must
be learned step by step just as a pro-
fessional man, or a mechanic, or a busi-
ness man learns his special line.

MARIE MERRON.
A CAUTION.

Editor RURAL WORLD: This is the
time of year to look out for roup, cholera
and lice. A correspondent is having
trouble with his flock. He has been de-
crying for some time, but his fowls con-
tinue to die. He says their combs turn
dark, they have diarrhoea and he thinks
it is cholera. For the benefit of this man
and any other that may have sick fowls
I will say that there is no cure for gen-
uine cholera. When cholera once gets into
your flock you will know what is the mat-
ter. The cholera in its most deadly form
is likely to appear at any time of the
year, but most likely in the fall and does
its work quickly; you will hardly know
the fowl is sick before it is dead. They
will drop dead from the roosts at night.

Fifteen years ago I had the cholera in
my flock. Often I would look over the
flock in the afternoon at any time of the
year, but most likely in the fall and does
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cholesterol will not have to wait long
to find it out. It may be nothing more
than a case of indigestion, caused by bad
feed, lice, etc.

Clean up and purify the hen house and
surroundings. If your fowls are lousy
clean out the lice, feed grain and give
the fowls clean water to drink. Possibly
your fowls have been drinking from man-
ure sinks or filthy pools. Your cock-
chickens that are not worth saving. A
good, healthy strain of fowls is seldom
sick. The weakened condition of your
flock may be due to lice. Give the poultry
house, coops, etc., a general clean-
ing up and disinfecting. Use some good
liquid lice killer and disinfectant. Kill
all the weak, sickly fowls that have black
combs and you may succeed in prevent-
ing further trouble. There is just one
plan to manage cholera, and that is to
thoroughly disinfect the premises and
stop the spread of the disease. No doc-
tor or pampering with sick fowls will
do any good.

O. F. GREER.
Burton, Ind.

GLEN RAVEN EGG FARM NOTES.<

